

REMARKS/ARGUMENTS

STATUS OF THE CLAIMS

Claims 5, 6, 21, 51 and 52 were amended. With entry of this amendment claims 5, 6, 21, 51, and 52 are pending. Amendments to claims 5, 6, 21, 51, and 52 are for purposes of clarification only, support for which can be found throughout the application as filed. No new matter is added by these amendments.

Claim 52 has been amended to stand alone as an independent claim. The remaining claims have been made dependent upon claim 52. Claim 52 was originally dependent upon independent claim 45, while claim 51 was originally dependent upon claims 45, 49 and 50. Claim 51 was amended wherein the feature "said probe arm configured to be substantially isolated from vibrations created by the scanning stage" has been deleted since this phrase is considered redundant in the present of the feature "each separate support structure being substantially vibrationally isolated from each other". In addition, the feature "said probe arm positioned between the object to be examined and the scanning stage" has been deleted as it is considered a strict limitation of what is presented in the drawings of Figure 12. The description supports general configurations with no indication to specific arrangements such as described on page 6, lines 16-18 and page 44, lines 5-8, and as such the amendment is deemed proper. Claim 52 was amended for clarity and consistency of claim language, replacing "may be" with "is".

Claim 52 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically the terms "substantially elongated" and "distant in claim 52 were deemed to be relative terms which renders the claim indefinite. In addition, the phrase "may be positioned" was deemed to render the claim indefinite as the phrase did not recite any real limitation on the structure of the device.

Claim 5, 6, and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sato *et al.* (U.S. Patent No.: 5,530,237). Claim 52 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato *et al.* (U.S. Patent No.: 5,530,237).

Claims 5, 6, 21, 51 and 52 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-8, 10, 12, 14-16, 28, 30 and 31 of copending Application No. 10/220,872.

Applicants address the examiner's remarks in the order presented in the Office Action (dated November 24, 2003). All claim amendments are made without prejudice and do not represent an acquiescence in any ground of rejection.

REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claim 52 was rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite.

More particularly, the examiner deemed the term "substantially elongated" in claim 52, line 9, as a relative term which renders the claim indefinite. As the examiner stated in the Office Action dated November 24, 2004, the term "substantially elongated" is not defined by the claim, as the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Further, the examiner stated that the term "distant" in claim 52, line 10, as also a relative term which renders the claim indefinite. The term "distant" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. And finally, the examiner stated that claim 52, the phrase "may be positioned" renders the claim indefinite as the phrase does not recite any real limitation on the structure of the device.

This rejection is traversed in part and is overcome by amendment.

The term "substantially elongated" is not indefinite and it is understood by one of skill in the art and is described in the specification as a whole to mean that the probe arm is sufficiently elongated so that the optical output device is positioned as required by the instant invention.

The term "distant" is not indefinite and it is understood by one of skill in the art and is described in the specification as a whole to mean "not touching" therefore the optical output device is positioned at a distance that allows it to be separated from the object to be examined.

And finally, the term "may be positioned" is also not indefinite. However to expedite prosecution, Applicants have amended the phrase for clarity and consistency of claim language.

Therefore, in view of the arguments and amendments discussed above, it is respectfully requested that the rejection of claim 52 under 35 U.S.C. §112, second paragraph, be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 102

Claims 5, 6, and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Sato *et al.* (U.S. Patent No.: 5,530,237).

Regarding claims 5, 6, and 21, the examiner stated that Sato teaches an apparatus for automatically focusing a microscope comprising, an objective lens 2, an illumination beam source 10 emitting visible light, an imaging lens 3, an autofocusing light beam source emitting infrared light 17, a beamsplitter 7, a detection system lens 18, and an autofocus detecting device comprising, sensor 22, an iris 21, an auxiliary beam splitter 19, a auxiliary light sensor 20, and a focusing correction system which determines the displacement of the image plane from a preferred reference plane as recited in claims 5, 6, and 21 (Col. 2, lines 56-62; Col. 5, lines 24-27; Col. 6, lines 53-59) (See also Fig. 1).

The rejection is traversed in part and in part overcome by amendment. Applicants respectfully submit that claim 5, 6, and 21, as amended herein, patentably defines over the prior art for the following reasons.

The present invention differs from Sato *et al.* in that it provides a microscope suitable for high-throughput screening (HTS), which comprises a plurality of lenses positioned along a main optical axis, a probe arm supporting the plurality of lenses, a support on which the samples are placed, and an optical output device; wherein the unfolded configuration of the main optical axis extending along a single plane, and the separation of the optical output device from the samples to be examined, allows the continuous feed of samples to be examined while increasing the speed at which the viewing of the samples by the microscope is performed, all these factors resulting in an increased capacity in screening.

In addition, the physical configuration allows for the analysis of non-flat biological samples, such as living cells, which are extensively investigated in an HTS environment.

Claims 5, 6, and 21 have been made dependant upon claims 52 and 51, therefore the 35 U.S.C. § 102(b) anticipation rejection should be withdrawn in view of the amendments to the claims. And in view of the absence of any hint in the cited document by Sato *et al.*

towards the advantages presented by the present microscope as discussed above, it is further submitted claims 5, 6, and 21 are not anticipated by Sato *et al.* Therefore the rejection of claims 5, 6, and 21 under 35 U.S.C. § 102(b) should be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 103

Claim 52 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sato *et al.* (U.S. Patent No.: 5,530,237).

Regarding claim 52, the examiner stated that Sato teaches a microscope comprising, a plurality of lenses 2, a support 25, an object S, an optical output device 5, wherein a main optical axis is unfolded (See Fig. 1). The examiner stated that Sato does not explicitly teach a support holding the lenses 2 and 3. However, it is well known in the art to align and hold optical elements to provide for proper functioning of an optical device. It would have been obvious to one of ordinary skill in the art to provide a support for the lenses 2 and 3, as supporting and aligning optical elements is well known in the art, in order to provide for proper functioning of the microscope.

This rejection is respectfully traversed because the cited art does not teach or suggest the claimed invention. Applicants' arguments as applied to the 35 U.S.C. § 102(b) rejection of claims 5, 6, and 21 above can be applied here.

The examiner stated that Sato *et al.* teaches an apparatus for automatically focusing a microscope comprising, an objective lens 2, an illumination beam source 10 emitting visible light, an imaging lens 3, an autofocusing light beam source emitting infrared light 17, a beamsplitter 7, a detection system lens 18, and an autofocus detecting device comprising, sensor 22, an iris 21, an auxiliary beam splitter 19, a auxiliary light sensor 20, and a focusing correction system which determines the displacement of the image plane from a preferred reference plane as recited in claims 5, 6, and 21 (Col. 2, lines 56-62; Col. 5, lines 24-27; Col. 6, lines 53-59) (See also Fig. 1).

The rejection is traversed.

The present invention differs from Sato *et al.* in that it provides a microscope suitable for high-throughput screening (HTS), which comprises a plurality of lenses positioned along a main optical axis, a probe arm supporting the plurality of lenses, a support on which the samples are placed, and an optical output device; wherein the unfolded configuration of the

main optical axis extending along a single plane, and the separation of the optical output device from the samples to be examined, allows the continuous feed of samples to be examined while increasing the speed at which the viewing of the samples by the microscope is performed, all these factors resulting in an increased capacity in screening. Thus, the physical configuration presented in claim 52 is crucial in allowing the high throughput screening (HTS) of samples.

In addition, the physical configuration allows for the analysis of non-flat biological samples, such as living cells, which are extensively investigated in an HTS environment.

In view of the absence of any hint in Sato *et al.* towards the advantages presented by the present microscope as discussed above, it is submitted that claim 52 and therefore the invention as a whole, is not obvious over Sato *et al.* It is respectfully requested that the rejection of claim 52 under 35 U.S.C. §103(b) should be withdrawn.

DOUBLE PATENTING

Claims 5, 6, 21, 51, and 52 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-8, 10, 12, 14-16, 28, 30, and 31 of copending Application No. 10/220,872. The examiner stated that although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of present application have the same scope as the claims in copending application. The examiner added that this was a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicants disagree with the rejection. Nonetheless, without conceding the obviousness of claims 5, 6, 21, 51 and 52, in view of the cited claims of the copending application, Applicants will submit a terminal disclaimer over Application Serial No. 10/220,872 upon receipt of an indication of allowability of the cited claims in that case and of claims 5, 6, 21, 51 and 52 in the present case.

DOCKET NO.: TIBO-0013 (TIP0017USA)
Application No.: 09/521,618
Office Action Dated: November 24, 2003


PATENT

CONCLUSION

Applicants have enclosed a Transmittal Form with authorization to charge fees in this application to our Deposit Account No. 23-3050. The Commissioner is further authorized to charge any additional fees related to this application and any extension of time to Deposit Account 23-3050.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at (206) 332-1380.

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